Scientific Program

Monday, July 13 2015

8:00-9:00 *Registration*

9:00-9:30 ***Welcome and opening remarks UPoN 2015***

Ferran Sancho Piffaré – Rector de la *Universitat Autònoma de Barcelona* (UAB)
Emilio Lora-Tamayo D'Ocón - President of the *Consejo Superior de Investigaciones Científicas* (CSIC)
Xavier Oriols – Chairman *UPoN 2015*

Fluctuations in econophysic

9:30-10:00 **Novel Statistical Physics Approaches to Understanding Economic Fluctuations. (INVITED)**

H. Eugene Stanley[1]
[1]*Boston University, USA*

Applications of noise (I)

CHAIRMAN: Michael F. Shlesinger (Office of Naval Research ONR, USA)

10:00-10:30 **Active Brownian motion in confined geometries. (INVITED)**

Vyacheslav R. Misko[1,2]
[1]*Universiteit Antwerpen, Belgium,* [2]*CEMS, Japan*

10:30-10:50 **Brownian motion and weak ergodicity breaking. (ORAL)**

P. Massignan[1], *C. Manzo*[1], *J. A. Torreno-Pina*[1], *M. F. García-Parajo*[1], *M. Lewenstein*[1], *G. J. Lapeyre Jr*[1]
[1]*ICFO, Institute of Photonic Sciences, Spain*

10:50-11:10 **Brownian motors in the micro-scale domain: Enhancement of efficiency by noise. (ORAL)**

Jakub Spiechowicz[1], *Peter Hänggi*[2], *Jerzy Łuczka*[3]
[1]*University of Silesia, Poland,* [2]*Universität Augsburg, Germany,* [3]*Silesian Center for Education and Interdisciplinary Research, University of Silesia, Poland*

11:10-11:30 **Unconditional security in practical Kirchhoff-law-Johnson-noise key exchangers. (ORAL)**

Berry Chen[1], Laszlo B. Kish[1], Claes G. Granqvist[2], Robert Mingesz[3], Zoltan Gingl[3]

[1]Texas A&M University, USA, [2]Uppsala University, Sweden, [3]University of Szeged, Hungary

11:30-12:00 ***Coffee Break***

Noise in complex and non-linear systems (I)

CHAIRMAN: Lukasz Machura (University of Silesia, Poland)

12:00-12:30 **Rates of rare events: scaling, fragility, and delay effects. (INVITED)**

Mark Dykman[1]

[1]Michigan State University, USA

12:30-12:50 **Stochastic resonance and diversity-induced resonance in complex systems. (ORAL)**

Marco Patriarca[1], Els Heinsalu[1], Emilio Hernández-García[2], Raúl Toral[2]

[1]NICPB-National Institute of Chemical Physics and Biophysics, Estonia, [2]CSIC-UIB, Spain

12:50-13:10 **Non-hermitian diffusion. (ORAL)**

Maciej A. Nowak[1]

[1]Jagiellonian University, Poland

13:10-14:40 ***Lunch (at the Dining Room of Casa Convalescència)***

Fluctuations in biological systems (I)

CHAIRMAN: Aneta Stefanovska (Lancaster University, UK)

14:40-15:10 **From cell membranes to ultracold gases: classical and quantum diffusion in inhomogeneous media. (INVITED)**

Pietro Massignan[1], G. J. Lapeyre[1,2], J. A. Torreno-Pina[1], Anielo Lampo[1], Jan Wehr[3], M. F. García-Parajo[1], M. Lewenstein[1]

[1]ICFO-Institut de Ciències Fotòniques, Spain, [2]IDAEA-CSIC, Spain, [3]University of Arizona, USA

15:10-15:30 **A motor that detects the length of DNA by using chain fluctuation. (ORAL)**

Ana Maria Florescu[1], Kuni H Iwasa[1,2]

[1]Max Planck Institute for Physics of Complex Systems, Germany, [2]National Institutes of Health (NIH), USA

15:30-15:50 **Model and parameter determination for molecular motors from single molecule experiment. (ORAL)**

Francisco Javier Cao[1]

[1]Universidad Complutense de Madrid, Spain

15:50-16:10 **Free energy measurement of ligands binding nucleic acids using fluctuation theorems.** **(ORAL)**

Joan Camunas-Soler[1], Anna Alemany[1],Felix Ritort[1,2]

[1]Universitat de Barcelona, Spain, [2]Instituto de Salud Carlos III, Madrid, Spain

16:10-16:40 ***Coffee Break***

Fluctuations in biological systems (II)

CHAIRMAN: Bernardo Spagnolo (Università di Palermo, Italy)

16:40-17:10 **Is it possible to detect long---range interactions among biomolecules through noise and diffusion?** **(INVITED)**

I. Donato[1], M. Gori[1], I. Nardecchia[1], M. Pettini[1], J. Torres[2], L. Varani[2]

[1]Aix-Marseille University, France, [2]Montpellier University, France

17:10-17:30 **Electrochemical noise analysis to probe ion transport mechanisms in a membrane channel.** **(ORAL)**

Maria Queralt-Martin[1], M. Lidón López[1], Antonio Alcaraz[1]

[1]Universitat Jaume I, Spain

17:30-17:50 **Coulomb Blockade of Stochastic Permeation in Biological Ion Channels.** **(ORAL)**

W.A.T. Gibby[1], I. Kh. Kaufman[1], D. G. Luchinsky[1], P.V.E. McClintock[1], R.S. Eisenberg[2]

[1]Lancaster University, UK, [2]Rush University, Chicago, USA

17:50-18:10 **Antipersistent Random Walk in a Two State Flashing Magnetic Potential.** **(ORAL)**

Pietro Tierno[1], Francesc Sagués[1], Tom H. Johansen[2,3], Igor M. Sokolov[4]

[1]Universitat de Barcelona, Spain, [2]University of Oslo, Norway, [3]Center for Advanced Study at The Norwegian Academy of Science and Letter, Norway, [4] Humboldt-Universität zu Berlin, German

18:10-18:30 **Giant acceleration of diffusion observed in a single-molecule experiment on F1-ATPase.** **(ORAL)**

Kumiko Hayashi[1]

[1]Tohoku University, Japan

Tuesday, July 14 2015

Quantum noise and coherence (I)

CHAIRMAN: Wolfgang Belzig (University of Konstanz, Germany)

9:00-9:30 **The role of temperature in different thermodynamic ensembles. (INVITED)**

Peter Hänggi[1]

[1]*Universität Augsburg, Germany*

9:30-10:00 **Adiabatic passage and noise in quantum dots. (INVITED)**

Sigmund Kohler[1]

[1]*CSIC, Madrid, Spain*

10:00-10:20 **Non-zero probability of detecting identical electrons at the same position: How does it affect the Landauer-Büttiker noise expression at high temperatures? (ORAL)**

Enrique Colomés[1], *Damiano Marian*[1], *Xavier Oriols*[1]

[1]*Universitat Autònoma de Barcelona, Spain*

10:20-10:40 **Dissipative dynamics of a quantum particle strongly interacting with a super-Ohmic heat bath. (ORAL)**

Luca Magazzù[1,2], *Davide Valenti*[1], *Bernardo Spagnolo*[1,2,3]

[1]*Università di Palermo, Italy,* [2]*Lobachevsky State University, Russia,* [3]*INFN Catania, Italy*

10:40-11:00 **Fractional quantum Hall spectroscopy investigated by a resonant detector. (ORAL)**

Alessandro Braggio[1], *Matteo Carrega*[1], *Dario Ferraro*[2,3], *Maura Sassetti*[4,1]

[1]*SPIN-CNR, Italy,* [2]*Université de Toulon, France,* [3]*Université de Genève, Switzerland,* [4]*Università di Genova, Italy*

11:00-11:30 ***Coffee Break***

Experimental frontiers of noise

CHAIRMAN: Luca Varani (University of Montpellier, France)

11:30-12:00 **Thermal and mechanical noise in gravitational wave detectors. (INVITED)**

Gianpietro Cagnoli[1]

[1]*Université de Lyon, France*

12:00-12:20 **The quest for the missing noise in a micro-mechanical system out of equilibrium. (ORAL)**

Mickael Geitner[1], *Felipe Aguilar Sandoval*[1,2], *Éric Bertin*[3], *Ludovic Bellon*[1]

[1]*Université de Lyon & CNRS, France,* [2]*Universidad de Santiago del Chile, Chile,* [3]*Université Joseph Fourier & CNRS, France*

12:20-12:40 **Noise Thermal Impedance: a way to access electron dynamics. (ORAL)**

E. Pinsolle[1], B. Reulet[1]

[1]Université de Sherbrooke, Canada

12:40-15:30 ***Poster session & Lunch (at the Dining Room of Casa Convalescència)***

Applications of noise (II)

CHAIRMAN: Laszlo Kish (Texas A&M University, USA)

15:30-15:50 **Towards an information-theoretic model of the Allison mixture. (ORAL)**

L. Gunn[1], F. Chapeau-Blondeau[2], A. Allison[1], D. Abbott[1]

[1]The University of Adelaide, Australia, [2]University of Angers, France

15:50-16:10 **How a player with finite memory can win by switching in a sequence of Parrondo Games? (ORAL)**

Ka Wai CHEUNG[1], Ho Fai MA[1], Degang Wu[1], Ga Ching LUI[1], Kwok Yip Szeto[1]

[1]The Hong Kong University of Science and Technology, China

16:10-16:30 **Asymmetry in Genetic Code and the Role of Parrondo's Paradox in Nature. (ORAL)**

Lee Kee Jin[1], Shu Jian Jun[1]

[1]Nanyang Technological University, Singapore

16:30-17:00 ***Coffee Break***

Fluctuations in materials and devices (I)

CHAIRMAN: Javier Mateos (University of Salamanca, Spain)

17:00-17:20 **Percolation noise at the metal-insulator transition of nanostructured VO_2 films. (ORAL)**

Zareh Topalian[1], Shu-Yi Li[1], Gunnar A. Niklasson[1], Claes G. Granqvist[1], Laszlo B. Kish[1,2]

[1]Uppsala University, Sweden, [2]Texas A&M University, USA

17:20-17:40 **Frequency-dependent shot noise in single-electron devices interpreted by means of waiting time distributions. (ORAL)**

Vincent Talbo[1], Javier Mateos[1], Sylvie Retailleau[2], Philippe Dollfus[2], Tomás González[1]

[1]Universidad de Salamanca, Spain, [2]Université Paris-Sud, France

17:40:18:00 **Conductance fluctuation in Si nanowires studied from first-principles. (ORAL)**

Riccardo Rurali[1], F. Iori[2], S. Ossicini[2]

[1]ICMAB-CSIC, Spain, [2]Università di Modena e Reggio Emilia, Italy

Wednesday, July 15 2015

Fluctuations in biological systems (III)

CHAIRMAN: Peter McClintock (Lancaster University, UK)

9:00-9:30 **Chronotaxic dynamics: when the characteristic frequencies fluctuate and the system is stable. (INVITED)**

Aneta Stefanovska[1], Philip Clemson[1], Y. F. Suprunenko[2]

[1]Lancaster University, UK, [2]University of Liverpool, UK

9:30-9:50 **Fluctuations and effective temperature in an active dumbbell system. (ORAL)**

Giuseppe Gonnella[1], Antonio Suma[2], Leticia F. Cugliandolo[3]

[1]Università di Bari and INFN, Italy, [2]SISSA, Trieste, Italy, [3]Sorbonne Universités, Paris, France

9:50-10:10 **Fluctuation Relations applied to characterize heterogeneous molecular ensembles. (ORAL)**

Alvaro Martínez-Monge[1], Anna Alemany[1], Felix Ritort[1]

[1]Universitat de Barcelona, Spain

10:10-10:30 **Stochastic facilitation in the brain? (ORAL)**

Lawrence M. Ward[1], Priscilla E. Greenwood[1]

[1]University of British Columbia, Canada

10:30-10:50 **Seeking for a fingerprint: analysis of point processes in actigraphy recording. (ORAL)**

Ewa Gudowska-Nowak[1]

[1]Jagiellonian University in Kraków, Poland

10:50-11:20 ***Coffee Break***

Fluctuations in materials and devices (II)

CHAIRMAN: Gijs Bosman (University of Florida, USA)

11:20-11:50 **Noise in graphene and carbon nanotube devices. (INVITED)**

Bernard Plaçais[1], C. Voisin[1], G. Fève[1], J. M. Berroir[1]

[1]Département de Physique de l'ENS Paris, France

11:50-12:10 **Is the peculiar behavior of 1/f noise in graphene the result of the interplay between band-structure and inhomogeneities? (ORAL)**

B. Pellegrini[1], P. Marconcini[1], M. Macucci[1], G. Fiori[1], G. Basso[1]

[1]Università di Pisa, Italy

12:10-12:30 **Monte Carlo study of velocity fuctuations during transient regimes in graphene. (ORAL)**

José M. Iglesias[1], *R. Rengel* [1], *E. Pascual*[1], *María J. Martín*[1]

[1]*Universidad de Salamanca, Spain*

12:30 ***Photo of the UPoN 2015 conference***

12:45-14:30 ***Lunch (at the Dining Room of Casa Convalescència)***

Fluctuations in materials and devices (III)

CHAIRMAN: Massimo Macucci (Università di Pisa, Italy)

14:30-14:50 **Measurements of RF noise in InGaAs/InAlAs recessed diodes: Signatures of shot-noise suppression. (ORAL)**

Ó. García-Pérez[1], *T. González*[1], *S. Pérez*[1], *A. Westlund*[2], *J. Grahn*[2], *J. Mateos*[1]

[1]*Universidad de Salamanca, Spain,* [2]*Chalmers University of Technology, Gothenburg, Sweden*

14:50-15:10 **1/f noise arising from time-subordinated Langevin equations. (ORAL)**

Julius Ruseckas[1], *Bronislovas Kaulakys*[1]

[1]*Vilnius University, Lithuania*

15:10-15:30 **Plasmonic Noise of Field-Effect Transistors Operating at Terahertz Frequencies. (ORAL)**

C. Palermo[1], *A. Mahi*[1], *H. Marinchio*[1], *L. Varani*[1], *P. Shiktorov*[2], *E. Starikov*[2], *V. Gruzhinskis*[2]

[1]*University of Montpellier, France,* [2]*Center for Sciences and Technology, Vilnius, Lithuania*

17:00 ***Visit to Sagrada Familia / Catedral del mar***

Committee dinner

Thursday, July 16 2015

Theoretical trends in noise and fluctuations (I)

CHAIRMAN: Peter Hänggi (Universität Augsburg, Germany)

9:00-9:30 **Fluctuation theorems and stochastic thermodynamics: applications to energy fluctuations in electric circuits and micro devices. (INVITED)**

Sergio Ciliberto[1]

[1]*Laboratoire de Physique de l'ENS de Lyon, France*

9:30-9:50 **Experimental realization of a microscopic Carnot engine. (ORAL)**

L. Dinis[1], *I. A. Martínez*[2], *E. Roldán*[3], *J. M. R. Parrondo*[1], *R. A. Rica*[4]

[1]*Universidad Complutense de Madrid, Spain,* [2]*Ecole Normale Superieure, Lyon, France,* [3]*Max Plank Institute, Dresden, Germany,* [4]*ICFO, Spain*

9:50-10:10 **Equilibrium and non-equilibrium fluctuations at the single molecule level: from free-energy measurements to inference. (ORAL)**

M. Ribezzi-Crivellari[1], *F. Ritort*[1]

[1]*Universitat de Barcelona, Spain*

10:10-10:30 **Fluctuations of intensive variables and non-equivalence of thermodynamic ensembles. (ORAL)**

A. Ya. Shul'man[1]

[1]*V. A. Kotel'nikov Institute of Radio Engineering and Electronics of the RAS, Russia*

10:30-11:00 ***Coffee Break***

Other topics of noise

CHAIRMAN: Felix Ritort (Universitat de Barcelona, Spain)

11:00-11:30 **How can the fluctuations in the motion of kayak-paddlers be used to estimate performance? (INVITED)**

Gergely Vadai[1], *Zoltan Gingl*[1]

[1]*University of Szeged, Hungary*

11:30-11:50 **Is There an Optimal Search Strategy? (ORAL)**

Michael F. Shlesinger[1]

[1]*Office of Naval Research ONR, USA*

11:50-12:10 **A stochastic model for phytoplankton dynamics in the Tyrrhenian Sea.** **(ORAL)**

Davide Valenti[1], Giovanni Denaro[1], Bernardo Spagnolo[1,2,3], Fabio Conversano[4], Christophe Brunet[4]

[1]Università di Palermo, Italy, [2]Lobachevsky State University, Russia, [3]INFN Catania, Italy, [4]Stazione Zoologica Anton Dohrn, Italy

12:10-14:50 ***Poster session & Lunch (at the Dining Room of Casa Convalescència)***

Theoretical trends in noise and fluctuations (II)

CHAIRMAN: Ludovic Bellon (Université de Lyon, France)

14:50-15:20 **All that glitters is not gold: Zero-point energy in the Johnson noise of resistors.** **(INVITED)**

Laszlo B. Kish[1]

[1]Texas A&M University, USA

15:20-15:40 **The spectral characteristics of steady-state Lévy flights in an infinitely deep rectangular potential well.** **(ORAL)**

A. A. Kharcheva[1], A. A. Dubkov[1], B. Spagnolo[2,3], D. Valenti[2]

[1]Lobachevsky State University, Russia, [2]Università di Palermo, Italy, [3]INFN Catania, Italy

15:40-16:00 **Stationary states in 2D systems driven by Lévy noises.** **(ORAL)**

B. Dybiec[1], K. Szczepaniec[1]

[1]Jagiellonian University, Poland

16:00-16:20 **Typical pure states and rare events for quantum many-body systems.** **(ORAL)**

Takaaki Monnai[1]

[1]Seikei University, Japan

16:20-16:50 ***Coffee Break***

Noise in complex and non-linear systems (II)

CHAIRMAN: Derek Abbott (The University of Adelaide, Australia)

16:50-17:10 **Degradation Stochastic Resonance Concept: Benefits of Controlled Noise Injection in Adaptive Averaging cell-based Architecture.** **(ORAL)**

Nivard Aymerich[1], Sorin Cotofana[2], Antonio Rubio[3]

[1]Broadcom Networks Spain, [2]Delft University, Netherlands, [3]UPC, Spain

17:10-17:30 **Noise on resistive switching: a Fokker-Planck approach.** **(ORAL)**

G. A. Patterson[1], D. F. Grosz[2,3], P. I. Fierens[1,2]

[1]Instituto Tecnológico de Buenos Aires, Argentina, [2]Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina, [3]Instituto Balseiro, Argentina

17:30-17:50 **Stochastic enhancement of absolute negative mobility.** **(ORAL)**

Lukasz Machura[1], *Jakub Spiechowicz*[1], *Jerzy Łuczka*[1]

[1]*University of Silesia, Poland*

17:50-18:10 **Cascade Amplification of Fluctuations.** **(ORAL)**

Michael Wilkinson[1], *Marc Pradas*[1], *Robin Guichardaz*[2], *Alain Pumir*[2]

[1]*The Open University, UK,* [2]*Ecole Normale Supérieure de Lyon, France*

18:10-18:30 **Conversion of mechanical noise into useful electrical energy using piezoelectric 2D Materials.** **(ORAL)**

Gabriel Abadal[1], *M. López-Suárez*[2], *W. Venstra*[3], *F. Torres*[1], *L. Gammaitoni*[2], *R. Rurali*[4]

[1]*Universitat Autònoma de Barcelona, Spain,* [2]*University of Perugia, Italy,* [3]*Delft University, Netherlands,* [4]*ICMAB-CSIC, Spain*

20:30 ***Gala dinner (Museu d'art de Catalunya)***

Friday, July 17 2015

Quantum noise and coherence (II)

CHAIRMAN: Paolo Bordone (Università di Modena e Reggio Emilia, Italy)

9:00-9:30 **Classical and quantum non-linear dynamics in optomechanical systems.** **(INVITED)**

Yaroslav M. Blanter[1]

[1]*Delft University of Technology, Netherlands*

9:30-9:50 **Pauli-Heisenberg Oscillations in Electron Quantum Transport.** **(ORAL)**

Karl Thibault[1], *Julien Gabelli*[2], *Christian Lupien*[1], *Bertrand Reulet*[1]

[1]*Université de Sherbrooke, Canada,* [2]*Université Paris-Sud, France*

9:50-10:10 **Effects of non-Gaussian α-stable noise sources on the transient dynamics of long Josephson junctions.** **(ORAL)**

Claudio Guarcello[1,2], *Davide Valenti*[1], *Bernardo Spagnolo*[1,2,3]

[1]*Università di Palermo, Italy,* [2]*Lobachevsky State University, Russia,* [3]*INFN Catania, Italy*

10:10-10:30 **On the weak measurement of the electrical THz current: a new source of noise? (ORAL)**

Damiano Marian[1], *Nino Zanghì*[2], *Xavier Oriols*[1]

[1]*Universitat Autònoma de Barcelona, Spain,* [2]*Università di Genova and INFN Genova, Italy*

10:30-11:00 ***Coffee Break***

Quantum noise and coherence (III)

CHAIRMAN: Yaroslav M. Blanter (Delft University of Technology, Netherlands)

11:00-11:30 **Elementary events and probabilities in time-dependent quantum transport. (ORAL)**

Wolfgang Belzig[1], *Mihajlo Vanevic*[2]

[1]*University of Konstanz, Germany,* [2]*University of Belgrade, Serbia*

11:30-11:50 **Electron interferometry in quantum Hall edge channels. (ORAL)**

Jerôme Rech[1], *Claire Wahl*[1], *Thibaut Jonckheere*[1], *Thierry Martin*[1]

[1]*Aix Marseille Université, France*

11:50-12:10 **Functional approach to heat-exchange, application to the spin boson model: from Markov to quantum noise regime. (ORAL)**

Matteo Carrega[1], *Paolo Solinas*[1], *Alessandro Braggio*[1], *Maura Sassetti*[2], *Ulrich Weiss*[3]

[1]*SPIN-CNR, Italy,* [2]*Università di Genova, Italy,* [3]*Universität Stuttgart, Germany*

12:10-12:30 **Heat and charge current fluctuations in a thermoelectric quantum dot. (ORAL)**

Adeline Crépieux[1], *Fabienne Michelini*[1]

[1]*Aix Marseille Université, France*

12:30-12:45 ***Concluding remarks***

Lino Reggiani[1]

[1]*University of Salento, Italy*

POSTER SESSION

P.01 **Non-Gaussian Stochastic Diffusion: Accounting Fourth Cumulant**

Boris Grafov[1]

[1]*A.N. Frumkin Institute of Physical Chemistry and Electrochemistry of Russian Academy of Sciences, Russia*

P.02 **Quasi-stable PDF of velocities of accelerated metal clusters on graphite before joining an island**

Ekaterina I. Anashkina[1,2], *Aleksey V. Kargovsky*[1], *Olga A. Chichigina*[1], *Alexandra K. Krasnova*[1]

[1]*Lomonosov Moscow State University, Russia,* [2]*Università di Palermo, Italy*

P.03 **Random walks in random stochastic environments**

M. A. García-March[1], *Gerald J. Lapeyre Jr.*[2], *Pietro Massignan*[1], *and Maciej Lewenstein*[1,3]

[1]*ICFO-Institut de Ciències Fotòniques, Spain,* [2]*IDAEA – Institute of Environmental Assessment and Water Research, Spain,* [3]*ICREA – Institució Catalna de Recerca i Estudis Avançats, Spain*

P.04 **Independence of superdiffusion in random low-density Lorentz gas on geometrical properties of moving scatterers**

Alexandra K. Krasnova[1,2], *Olga A. Chichigina*[1], *Ekaterina I. Anashkina*[1]

[1]*Moscow State University, Russia,* [2]*Schmidt Institute of Physics of the Earth of the Russian Academy of Sciences, Russia*

P.05 **Single molecule measurement of the effective temperature in nonequilibrium steady states**

E. Dieterich[1], *J. Camunas-Soler*[2,3], *M. Ribezzi-Crivellari*[2,3], *U. Seifert*[1], *F. Ritort*[2,3]

[1]*Universität Stuttgart, Germany,* [2]*Universitat de Barcelona, Spain,* [3]*Instituto de Salud Carlos III, Madrid, Spain*

P.06 **Finite-frequency noise in a non-interacting quantum dot**

Redouane Zamoum[1], *Mirelle Lavagna*[2], *Adeline Crépieux*[3]

[1]*Université de Bouira, Algeria,* [2]*Comissariat à l'Energie Atomique de Grenoble INAC/SPSMS, France,* [3]*Aix Marseille Université, France*

P.07 **Features of Noise in Ultrathin Gold Nanowire Structures**

Volodymyr Handziuk[1], *Sergii Pud*[1], *Alexandre Kisner*[2], *Svetlana Vitusevich*[1]

[1]*Forschungszentrum Jülich, Peter Grünberg Institute (PGI 8), Germany,* [2]*Rutgers University, USA*

P.08 **High Frequency Cutoff in 1/f Spectra of Hole Doped LaxCa1-xMnO3 Manganite Single Crystals**

Jacek Przybytek[1], *Jan Fink-Finowicki*[2], *Roman Puźniak*[2], *Grzegorz Jung*[2,3]

[1]*University of Warsaw, Poland,* [2]*Institute of Physics PAS, Poland,* [3]*Ben Gurion University of the Negev, Israel*

P.09 **Noise-induced resonance-like phenomena in InP crystals embedded in fluctuating electric fields**

D. Persano Adorno[1], *N. Pizzolato*[1], *P. Alaimo*[1], *B. Spagnolo*[1,2]

[1]*Università di Palermo, Italy,* [2]*INFN Catania, Italy*

P.10 **Study on the origin of 1/f noise in bulk acoustic wave resonators**

F. Sthal[1], M. Devel[1], J. Imbaud[1], R. Bourquin[1], S. Ghosh[1], G. Cibiel[2]

[1]FEMTO-ST Institute, France, [2]CNES, France

P.11 **The electron transit time is not the ultimate responsible for the high-frequency noise: The frontier between electronics and electromagnetism**

Zhen Zhan[1], E. Colomés[1], A. Benali[1], X. Oriols[1]

[1]Universitat Autònoma de Barcelona, Spain

P.12 **Random Telegraph Noise (RTN) analyzed by using Weighted Time Lag Method in Resistive Switching devices**

M. Maestro[1], J. Diaz[1], A. Crespo-Yepes[1], J. Martin-Martinez[1], R. Rodriguez[1], M.B. Gonzalez[2], F. Campabadal[2], M. Nafria[1], X. Aymerich[1]

[1]Universitat Autònoma de Barcelona, Spain, [2]Institut de Microelectronica, IMB-CNM (CSIC), Spain

P.13 **On the Role of Current-Voltage Correlations on the Electric Power Consumption of Electronic Devices**

Guillermo Albareda[1], Fabio Lorenzo Traversa[2], Xavier Oriols[3]

[1]Universitat de Barcelona, Spain, [2]University of California, USA, [3]Universitat Autònoma de Barcelona, Spain

P.14 **$1/f^{\beta}$ fluctuations from sequences of rectangular pulses**

Vaidas Juknevičius[1], Bronislovas Kaulakys[1], Julius Ruseckas[1]

[1]Vilnius University, Lithuania

P.15 **D'yakonov-Perel' spin decay in the weak scattering regime and the case of graphene**

Xavier Cartoixà[1]

[1]Universitat Autònoma de Barcelona, Spain

P.16 **Current Fluctuations Originating from Non-Metallic (Physical) Leads**

Guillermo Albareda[1], Liping Chen[2], Xavier Oriols[3], Ignacio Franco[2]

[1]Universitat de Barcelona, Spain, [2]University of Rochester, USA, [3]Universitat Autònoma de Barcelona, Spain

P.17 **Elastic response and secondary structure of single-stranded DNA**

Xavier Viader-Godoy[1], Joan Camunas-Soler[1], Maria Marti-Prieto[1], Felix Ritort[1,2]

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